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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,588	12/29/1999	BALWINDER S. SAMRA	17207-00005	2447

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EXAMINER

REAGAN, JAMES A

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 05/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/474,588	SAMRA ET AL.
Examiner	Art Unit	
James A. Reagan	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 29 December 1999.

2a) This action is FINAL.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-18 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-18 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 29 December 1999 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## DETAILED ACTION

### Status of Claims

1. This action is in response to the application filed on 29 December 1999.
2. Claims 1-18 have been examined.

### Specification

3. The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.

### Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 5, 9, 10, 12, 13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melchione et al., (US 5,930,764).

6. **Claim 1:**

With regard to the limitation of *building models of predicted customer profiles*, Melchione discloses customer profiles based on a demographic database (column 5, lines 1-2). With regard to the limitation of *generating scores*

*for prospective customer in the database based on the predicted customer profiles*, Melchione discloses a scoring system, models developed from customer profiles, predictions based on the customer profiles (column 42 line 51 to column 43 line 16). Melchione does not specifically disclose that customer profiles are built. It is inherent, however, that a profile must be assembled. It would have been obvious to one of ordinary skill in the art at the time of the invention to build a customer profile and generate scores according to the profile to predict customer behavior because predicting customer behavior increases the likelihood of gaining new customers, thereby increasing profits.

**Claims 4 and 12:**

With regard to the limitation of *using a propensity model to supply predicted answers to questions*, Melchione discloses propensity models that address the likelihood of a customer meeting a certain criteria such as having a child (column 43, lines 5-16). It would have been obvious to one of ordinary skill in the art at the time of the invention to build a propensity model to predict customer behavior because predicting customer behavior increases the likelihood of gaining new customers, thereby increasing profits.

**Claims 5 and 13:**

With regard to the limitation of *using a propensity model to determine how likely a customer is to close an account early*, Melchione discloses predicting when a customer will "overcome inertia" and change banks or open new accounts (column 5, lines 31-42). Melchione does not specifically disclose that

changing banks also includes closing an account. However, changing banks inherently implies dissatisfaction with the current bank and thus would also inherently imply closing an existing account in favor of a new one at another source. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a propensity model to predict customers leaving a bank in favor of a new one because predicting losses in revenue provides an opportunity to prevent the loss before it occurs.

**Claims 9 and 18:**

With regard to the limitation of *guiding a user to optimize marketing campaign selections based on criteria from a customer database*, Melchione discloses optimizing the use of marketing resources (column 10, lines 6-8). Melchione does not specifically disclose that the optimization is done for the benefit of a user or that the marketing resources are criteria from the customer database. However, it is inherent that any use of the database would be for the benefit of a user, and optimizing a marketing campaign would benefit any users associated with the campaign. In addition, it is inherently assumed that the marketing resources are equivalently the criteria maintained on the customer database that are used to predict customer behavior. It would have been obvious to one of ordinary skill in the art at the time of the invention to optimize data on a customer database for the benefit of the users in a marketing campaign because correctly utilizing data increases efficiency and profits.

**Claim 10:**

With regard to the limitation of a *customer database*, Melchione discloses a customer information database (title). With regard to the limitation of *graphical user interface for entering marketing campaign data*, Melchione discloses a graphical interface (column 6, lines 43-46). Melchione does not specifically disclose that the GUI is used to enter marketing campaign data. However, since the data is maintained on a computer-controlled database, it is inherent that some form of graphical user interface be used to enter the data into the database. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a user interface to input data into the database because this is an easy and efficient way to enter data.

In addition, with regard to the limitation of *models of predicted customer profiles based upon historic data* Melchione discloses customer profiles (column 39, lines 27-28) and propensity models (column 43, lines 5-16). Melchione does not specifically disclose that the models and profiles are based on historic data. However, it is the inherent that a customer profile is based on existing data gathered from previous customer behavior and using that data to try to recognize a pattern or habit. It would have been obvious to one of ordinary skill in the art at the time of the invention to base a customer profile on historic data because historic data provides the best indication of how a customer may behave in the future.

7. Claims 2, 3, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melchione in view of Pham et al., (US 5,970,482).

**Claims 2 and 11:**

Melchione discloses a sales process support system and method for identifying sales targets using a centralized database to improve marketing success, which utilizes customer profiles and a scoring system to predict customer activity. Melchione does not disclose *using an online analytical processing tool that combines models in the form of a multidimensional structure*. Pham, however, in column 13, line 6 does discloses using OLAP, and in lines 39-42 also discloses building a knowledge model to predict behavior. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Melchione scoring system with Pham's OLAP system to derive the modeling features of the claimed invention. Inherently, predictive models are constructed to transform accumulated data in to knowledge models to provide better customer service, target potential customers, and to forecast changes in the account status of a current customer. Accurately mining and modeling consumer data enhances an organization's capability to maximize profits and target new business.

**Claims 3 and 15:**

Melchione discloses a sales process support system and method for identifying sales targets using a centralized database to improve marketing success, which utilizes customer profiles and a scoring system to predict

customer activity. Melchione also discloses *building models of predicted customer profiles with dimensions comprising risk, attrition, and profitability* (predicting when a customer will change banks or open a new account; column 5, lines 31-42). Melchione does not specifically disclose *an online analytical processing tool*. Pham, however, in column 13, line 6 does discloses using OLAP, and in lines 39-42 also discloses building a knowledge model to predict behavior. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Melchione scoring system with Pham's OLAP system to derive the modeling features of the claimed invention. Inherently, predictive models are constructed to transform accumulated data in to knowledge models to provide better customer service, target potential customers, and to forecast changes in the account status of a current customer. Accurately mining and modeling consumer data enhances an organization's capability to maximize profits and target new business.

8. Claims 6-8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melchione in view of Sheppard, (US 6,026,397).

**Claims 6 and 14:**

Melchione discloses a sales process support system and method for identifying sales targets using a centralized database to improve marketing success, customer profiles, a scoring system to predict customer activity, and propensity models. Melchione does not disclose determining *how likely* a

*customer is to default on an account.* Sheppard, however, in column 2, lines 44-51 does discloses the probability of attrition i.e. default. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Melchione predicting and scoring system with Sheppard's probability of default to derive the modeling features of the claimed invention. Inherently, predictive models are constructed to transform accumulated data in to knowledge models to provide better customer service, target potential customers, and to forecast changes in the account status of a current customer. Accurately predicting negative behavior in an existing account enables the account manager to prepare and possibly avoid detrimental activities and ensures profitability.

**Claim 7:**

Melchione discloses a sales process support system and method for identifying sales targets using a centralized database to improve marketing success, customer profiles, a scoring system to predict customer activity, and propensity models. Melchione does not disclose a *behavior prediction model to estimate risk.* Sheppard, however, in column 2, lines 44-51 does discloses predicting customer behavior, profitability and associated risks. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Melchione predicting and scoring system with Sheppard's behavior propensity models derive the prediction features of the claimed invention. Inherently, predictive models are constructed to transform accumulated data in to knowledge models to provide better customer service, target potential customers,

and to forecast changes in the account status of a current customer. Accurately predicting negative behavior in an existing account enables the account manager to prepare and possibly avoid detrimental activities and ensures profitability by providing a technical advantage.

**Claim 8:**

Melchione discloses a sales process support system and method for identifying sales targets using a centralized database to improve marketing success, customer profiles, a scoring system to predict customer activity, and propensity models. Melchione does not disclose *using a client prospecting model for business development*. Sheppard, however, in column 2, lines 28-38 does discloses predicting and identifying customers, and developing profiles based on demographics and behavior. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Melchione predicting and scoring system with Sheppard's lead-forecasting models to derive the prediction features of the claimed invention. Inherently, identifying and developing leads is a primary concern when designing a marketing program that specifically targets new business clients and customers based on a demographic.

9. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melchione in view of Pham in further view of Sheppard.

**Claim 16:**

Melchione/Pham disclose a sales process support system and method for identifying sales targets using a centralized database to improve marketing success, customer profiles, a scoring system to predict customer activity, propensity models, and OLAP. Melchione/Pham do not disclose *a behavior prediction model to estimate risk*. Sheppard, however, in column 2, lines 44-51 does discloses predicting customer behavior, profitability and associated risks. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Melchione/Pham predicting and scoring system with Sheppard's behavior propensity models derive the prediction features of the claimed invention. Inherently, predictive models are constructed to transform accumulated data in to knowledge models to provide better customer service, target potential customers, and to forecast changes in the account status of a current customer. Accurately predicting negative behavior in an existing account enables the account manager to prepare and possibly avoid detrimental activities and ensures profitability by providing a technical advantage.

**Claim 17:**

Melchione/Pham disclose a sales process support system and method for identifying sales targets using a centralized database to improve marketing success, customer profiles, a scoring system to predict customer activity, propensity models, and OLAP. Melchione/Pham does not disclose *using a client prospecting model for business development*. Sheppard, however, in column 2, lines 28-38 does discloses predicting and identifying customers, and developing

profiles based on demographics and behavior. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the Melchione/Pham predicting and scoring system with Sheppard's lead-forecasting models to derive the prediction features of the claimed invention. Inherently, identifying and developing leads is a primary concern when designing a marketing program that specifically targets new business clients and customers based on a demographic.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **James A. Reagan** whose telephone number is **(703) 306-9131**. The examiner can normally be reached on Monday-Friday, 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Tariq Hafiz** can be reached on **(703) 305-9643**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Receptionist** whose telephone number is **(703) 305-3900**.

Any response to this action should be mailed to:

***Commissioner of Patents and Trademarks***

**Washington, D.C. 20231**

or faxed to:

**(703) 746-7238** [After Final communications, labeled "Box AF"]

**(703) 746-7239** [Official communications]

**(703) 746-8144** [Informal/Draft communications, labeled  
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive, Arlington, VA, Fourth Floor Receptionist.

JAR

10 May 2002

  
KYLE J. CHOI  
PRIMARY EXAMINER  
Art Unit 3623